**Chunmei Zhu – CUNY Assessment Test Lesson Plan Sample**

**Objectives**

Students will do the following:

* Discuss how to solve word problems involving time and money
* Work as a class to solve word problems focusing on addition, subtraction, multiplication, and simple fractions
* Work with a partner to make up their own word problems

**Materials**

The class will need the following:

College-Level Mathematics: Exponential function.

<http://www2.cuny.edu/academics/testing/test-preparation-resources/>

**Procedures**

1. Explain to students that the properties of exponential function, the difference of exponential function a power function.

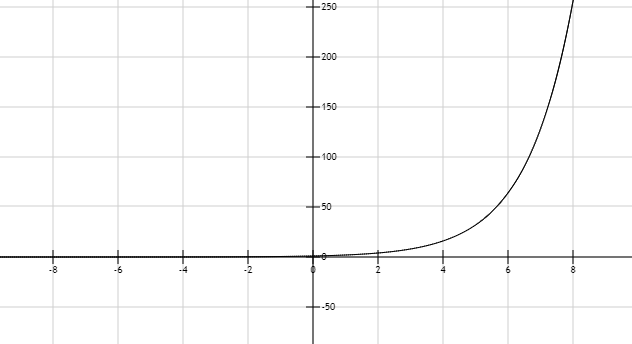
*Definition*: In a power function the independent variable (x) is raised to a (constant) power (c),

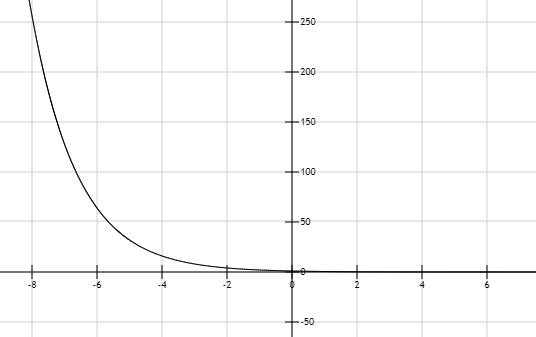
. In an exponential function the independent variable (x) is the exponent while the base is a constant,.

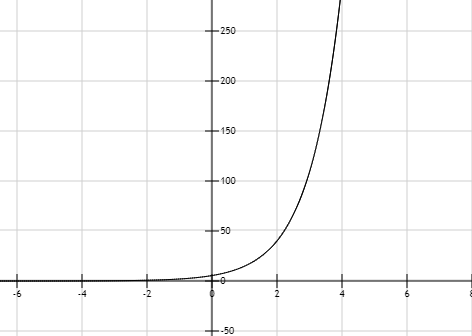
*Properties*: :

* The graph of will always contain the point (0,1). Or regardless of the value of b.
* For every possible b Note that this implies that.
* If then the graph of will decrease as we move from left to right. Check out the graph of below for verification of this property.
* If then the graph of will increase as we move from left to right. Check out the graph of below for verification of this property.
* If then x=y.

1. Show how to calculation three functions and sketch the graph :





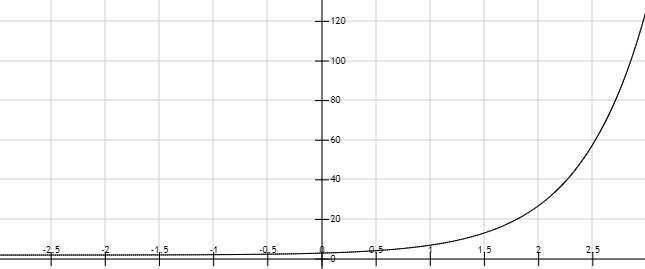


1. Answer questions by following discussion section.

**Practical Questions**

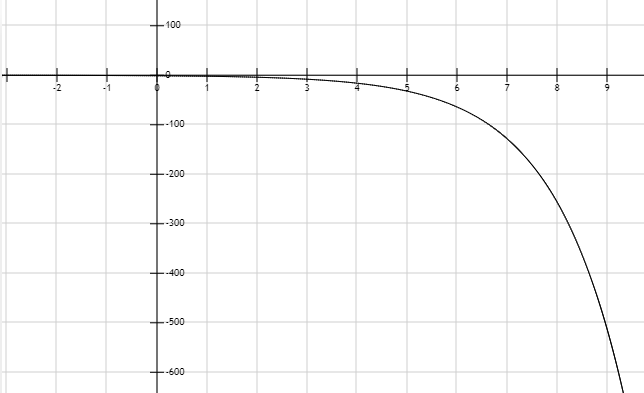
Q1. , and answer the question in discussion section

Answer: x is a real number; Y increase while x is increased, y >2. The graph cross on the y-axis at (0, 3).



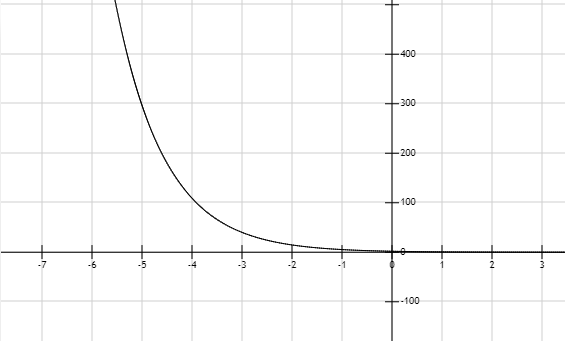
Q2. , and answer the question in discussion section

Answer: x is a real number; Y increase while x is increased, y >2. The graph cross on the y-axis at (0, 3).



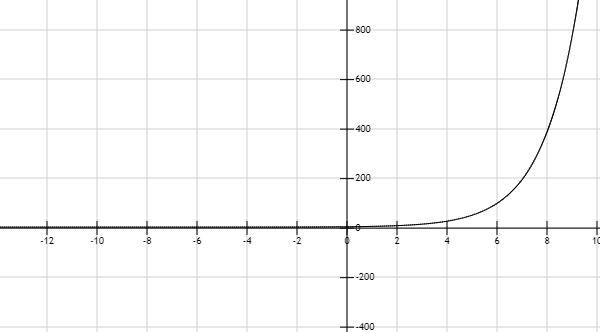
Q3. , and answer the question in discussion section

Answer: x is a real number; Y increase while x is increased, y >2. The graph cross on the y-axis at (0, 3).



Q5., and answer the question in discussion section

Answer: x is a real number; Y increase while x is increased, y >2. The graph cross on the y-axis at (0, 3).



**Discussion**

1. What is an independent variable in this function?
2. What is the domain of the independent variable? What is the domain of the dependent variable?
3. What is the relationship between x and y?
4. What is the graph look like?
5. What is the interceptor on x-axes, y-axes of the graph?

**Evaluation**

**Extensions**

Tips for sketching a two-dimension graph for a function:

* Analyst the character of the function: input and output domain, central point,
* List the value of the independent-single variable
* Use calculator to computer the dependent variable
* Plot the points in a graph
* Connect the points
* Descript the graph – the relationship of independent variable and dependent variable, center point

**Suggested Readings**

Resources of CUNY Assessment Test in Math

<http://www2.cuny.edu/academics/testing/test-preparation-resources/>

**Vocabulary**

Power

Base

Domain

Independent variable

Dependent variable

Curve – two-dimension graph

Interception point